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ABSTRACT

This document describes the Physical Education Learning Laboratory (PELL) of Temple University (Pennsylvania), a competency based physical activity program in which students (both physical education majors and non-majors) receive semester hour credits for demonstrating their knowledge and skills in whatever physical activities they select. Objectives of the program are described under the headings of variety, competency, life-long participation, motion analysis, socialization, self-responsibility and reliance, and self-worth. Procedures used in the laboratory are examined, including variable credit, orientation meetings, learning resources, testing procedures, credit granting processes, and feedback. Aspects of learning found to require unexpected amounts of attention are: accurate advisement, staff accessibility, materials, learner-oriented information, and continued faculty development. (MJB)

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The Physical Education Learning Laboratory

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BACKGROUND

The Physical Education Learning Laboratory (PELL) was first proposed at Temple University in 1967 and implemented in September, 1971. The present scope of the Lab program includes offering approximately 40 different physical activities each at three levels of difficulty to approximately 250 students per semester with credit enrollment varying from one to twelve semester hours per student. The Learning Laboratory staff consists of a Coordinator (1/3 faculty), two supervisors (one full time and one half time graduate assistants), a secretary (who also serves other facilty) and 22 faculty members who receive a part of their load for teaching in the Lab (one load credit for each activity taught).

The Lab was designed to reward, encourage and develop self-directed independent learning of physical education activities. It was further to serve as a way for students to receive credit for activities they had already learned, thereby making it unnecessary for them to participate in courses which would have been repetitious.

The Lab is now a competency based physical activity program where a student, whether a physical education major or a non-major, receives semester hour credits for demonstrating their knowledge and skills in whatever physical activities they select. Approximately 40% of the 250 students enrolled in the Lab each semester are not physical education major students. During the first summer session the percentage of non-majors increases to approximately 60% of the 60 student enrollment possible at that time.

WHY THE LAB?

(Objectives)

There were a number of philosophical positions which lead to the establishment of the Learning Lab. Some of these positions are shared with traditional programs, others are not. Actualization of these positions via varied teacher behavior is either fostered or inhibited by the structure in which the behavior exists. The lab structure was established to assist in the attainment of certain objectives which are difficult to realize in the traditional program. Some of these positions and corresponding objectives are set forth below.

Variety: It is a belief of lab personnel that physical ability and participation is a potentially important dimension in the quality of life of a majority of individuals. This is a belief shared as a basis for most programs of physical education. However, the Lab structure allows and encourages the learning of a variety of activities in a semester to a greater degree than the traditional program. It is the opinion of lab personnel that skill in a variety of activities increases the opportunity for participation at any point in time and certainly as the individual grows older and activity needs change.

Research suggests it is possible to use a structure with increased student decision making without cost to skill development. Dougherty (3) found no difference in skill development between command, task, or individual program groups. However, the attitude survey he used showed the task and individual program groups were pleased with the freedom given while the command group indicated a desire for more freedom.

Competency: It is a premise in the lab that an attitude of competency should be fostered as compared to an attitude that either time spent or competition with peers is the primary factor upon which ones worth (or capabilities) should be evaluated.

Within the lab this attitude is encouraged by awarding credit when abilities are demonstrated, regardless of time spent or where learned. If a student demonstrates ability the first day, he/she receives credit. If ability cannot be demonstrated adequately by the end of the semester an incomplete is assigned and at whatever subsequent point ability is demonstrated the incomplete is changed and credit is awarded.

Lifelong Participation: It is a premise in the lab that if students learn activities in situations similar to those which prevail after graduation they will be more likely to continue those activities after graduation and will add new activities via the same procedures they learned the original activities while in school. Learning with and from friends, using manuals, audio-visual materials and participation in workshops are examples of learning techniques which post graduates use, but which are also used in the lab. Further, in a study by Mariani (4) it was found that the task style of teaching was significantly superior to the command style in regard to skill retention.

Motion Analysis: It is a premise in the lab that the ability to analyze motion assists an individual to develop her/his skill and consequently gain more satisfaction from a given activity and more readily add new activities. The reciprocal teaching style fostered by the peer instruction encourages the development of motion analysis ability as do many of the self teaching techniques used in the lab. Additionally most of the workshop instructors teach to develop this ability.

Socialization: It is a premise within the Lab that positive socialization occurs when two or more friends gather to help each other improve their knowledge and skills in the physical activities. The fact that there are not a limited number of A or B grades to be assigned nor a teacher to regularly depend upon encourages students to work together to help each other attain competency.

Socialization writings relating to learning (2) indicate that learning in a positive peer attitude supports learning and positive peer attitude supports learning and positive personal achievement. Martens (5) found that although performance is facilitated by the presence of spectators, learning is imparied by this factor.

There is another aspect of socialization which should be considered when comparing a traditional program with the type of program typified by the Learning Lab. The aspect is whether the program encourages authoritarian or democratic behaviors. Brown and Cassidy (1, pp.180-181) stated it well when they wrote: "If the belief is democratic and the individual is held to be primary, the school is organized to achieve individual purposes ....Sometimes schools are organized for authoritarian learning within a democracy. This may happen because those organizing the schools programs do not understand the relationship of school design to the philosophy to be implimented. An authoritarian organization may seem to be the 'most efficient', and it is, if one wants to develop a 'respond to command' student group. Some will defend a response to whistle, march in and march out, do what you are told, regimentation of experiences, as needed "discipline' in today's society. We do indeed need disciplined citizens. But the hard facts in the philosophical commitment in our country are that we need self-disciplined individuals....From the curriculum organization through the lesson organization must run a steady philosophical commitment, if best learning is to take place."

Self Responsibility and Reliance: It is a premise in the lab that self responsibility and self reliance are desirable and are enchanced when the initiative and decision which the student must make are expanded. The student in the lab must choose their learning experiences from an array made available to them and which they can expand in direct proportion to their initiative and creativity. They can use the experiences at their disposal

or ignore any or all of them; but in the end they must demonstrate ability to receive credit. The time sequence and the methods used are at their discretion.

Self Worth: It is a premise in the lab that self worth should be fostered. Within the lab the following actions are designed to reinforce self worth: 1) Recognition (via credit) is given to the capabilities and activities the student has chosen to pursue on her/his own outside of the usual academic course work. This is in striking contrast to the idea that the only legitimate activities which can be dignified by credit are those which the student has learned or participated in via traditional course enrollment done for credit. 2) It is expected that the student has the personal qualities to make intelligent decisions about what activities he/she wants to learn and, therefore, the lab allows complete flexibility for the student to shift and change from one activity to another within the forty offered in the lab. Plus the student is expected to have the intelligence to decide for herself/himself which of the learning experiences they want to use and when they believe they are ready to take the tests.

Research by Martinek (6) and Martinek, Zaichkowsky and Cheffers (7) indicates that a physical activity program designed to encourage student sharing in decisions concerning curriculum selection, time allotment, amount of student interaction, amount of student mobility and overall student evaluation significantly improves the students' self concept. Rogers (8) suggests that personal adjustment is to a large degree dependent upon the formulation of a valid self concept which leads to self acceptance.

HOW THE LAB FUNCTIONS

Each procedure initiated, modified, or dropped from the lab has been tested against the combination of the beliefs described above. The procedures used in the lab are as follows:

Variable Credit: The lab has variable credit enrollment, e.g., it is possible to enroll from one to twelve semester hour credits at the student's choice. Approximately 40 activities are available for the student. Each activity is divided into beginner, intermediate, and advanced levels. Achievement at the beginning level is worth one semester hour credit, intermediate level two credits, and advanced level three credits. The student may use any combination of levels and activities to demonstrate enough ability to be awarded the number of semester hours for which he/she has enrolled in the lab.

Orientation Meetings: At the beginning of the semester an orientation meeting is held and all of the students enrolled that semester are requested to attend. At the orientation meeting the students receive a Handbook of Laboratory policies and schedules. The Handbook is essential and is titled "Learning Laboratory Handbook." It contains information on the following:

1. Operational Policies of the Lab
2. Advice on How to Use the Lab and Resources to Learn and Receive Credit.
3. Who to Consult With Problems and What Sources To Use For Continuing Communication
4. Sample Copies of All Standard Lab Forms
5. Schedule of Lab Practice and Test Hours
6. Master Schedule of All Workshops
7. Student Copy of Contract
8. Laboratory Copy of Contract

The first half of the Orientation Meeting is spent in silent reading of the Handbook and in the presentation of certain aspects of the theoretical basis for the Learning Lab, suggesting how to effectively use the Lab, how to avoid potential pitfalls, (such as procrastination), and answering questions.

The second half of the Orientation Meeting is spent in the student's selecting and contracting for those activities they plan to complete during the semester. This is accomplished by the students talking to the individual Lab instructors and by referring to the activity Learning Guides. The instructor of each activity is seated at a table which bears her/his name and the name of her/his activity. The Learning Guides, which describe the skill and knowledge needed for each level of each activity, are available in an open room at the end of the gymnasium where the Orientation Meeting is held.

When the student has selected the activities he/she wants to learn that semester, he/she informs the instructor of the activity by signing a registration card for the activity and leaving it with the instructor. Before leaving the gymnasium he/she writes his/her contract by tearing off the last page of the Handbook and indicating on it all of the activities he/she plans to complete during the semester. The Contract is given to either the Lab Coordinator or Lab Supervisor and the student is then considered enrolled.

The only other requirement the student has during the semester is to pass enough skill and knowledge tests to at least equal the number of credits for which he/she enrolled. Whenever the student passes a test the tester signs a Test Completion Form which the student is responsible for transmitting to the Laboratory Coordinator. Therefore the two things the student must do to receive credit in the Lab is, 1) make a Contract and 2) prove competency via completed Test Completion Forms.

Learning Resources: How a student acquires the knowledge and skill to pass the tests are her/his business. The Lab does provide resources to help the student learn but the resources are to be used at the student's discretion. Regardless of whether any of the resources are used, the student must still demonstrate knowledge and skill competency to receive

credit. The learning resources provided by the Lab include, but are not limited to:

1. Learning Guides - Materials, describing the skills needed and sources for learning skill and knowledge, are prepared for each of the three levels of each activity.
2. Workshops - Staff members specializing in a particular activity conduct six, two hour meetings for an activity. In selected activities, students may choose extended workshops which include 12 meetings per activity.
3. Loop Films - Films and projectors for viewing the films are available for most activities through the Departmental Instructional Materials Center (IMC).
4. Video-Tape Replay - Equipment and technicians to record a student's performance and replay it (perhaps with a loop film of a champion performer) are also available through the IMC.
5. Practice Schedule - At least one gymnasium is scheduled to be available for PELL students from 8:30 a.m. to 4:00 p.m. daily. Pools and other specialized facilities are open for practice on a less regular, but scheduled basis.

Additionally students may, with the approval of the instructor, participate in regularly scheduled activity courses. Such experiences as varsity teams, intramural participation, athletic clubs, private organizations, friends, and periodic help from the Laboratory Supervisor are also used by the students even though these activities are not supervised by the Learning Lab.

Testing Procedures: The student must demonstrate competency in both knowledge and skill to receive credit for an activity. Knowledge competency is usually demonstrated by passing a written examination. The written exams

are administered by the Laboratory Supervisor anytime the Lab is open. Ninety percent correct is usually required to pass the multiple choice examinations. Two forms are available for each exam. There is no penalty for trying and failing an exam and a student may attempt each exam as often as he/she wishes. When an exam is passed the Test Completion Form is signed and the student receives credit for knowledge competency to the level passed in that activity.

Skill examinations are usually administered by the instructor who is the specialist in charge of the workshops. Sometimes testing is done in conjunction with the workshop while at other times special testing dates are scheduled at the mutual convenience of the instructor and the student. Additionally the Laboratory Supervisor will administer skill tests in those areas for which he/she is qualified. Skill tests are the same as knowledge tests in that the student is not penalized for attempting an exam and can take the exam as often as time permits until he/she is successful. Also when the skill test has been successfully completed a Test Completion Form is signed by the testor and given to the Laboratory Coordinator by the student.

Awarding Credit: At the end of the semester each student's folder is checked to determine whether enough activity levels have been completed to at least equal the number of semester hours for which the student was enrolled as shown on their contract. If enough levels were completed, a "grade" of CREDIT is awarded. If not enough levels have been completed, an INCOMPLETE is given. However, the levels completed are kept in the student's folder and at anytime in the future when additional levels are added to come up to the number required, a change of grade goes through automatically changing the INCOMPLETE to a CREDIT. If a student completes more than enough levels during a semester it is possible for that student to enroll in any future semester and draw on her/his reserve levels to receive credit at

that time.

Feedback: The levels that a student completes during a semester are recorded directly on the Contract which the student submitted at the beginning of the semester. If enough levels were completed a "CR" is recorded at the upper right hand corner of the Contract. If not enough levels were completed an "I" is recorded on the Contract. A photostat copy is then made of the Contract and mailed to the student as an indicator of what the Lab office records show in her/his file. Via an accompanying memo he/she is encouraged to set-up an appointment to discuss any discrepencies which might exist. Additionally a Summary Form is sent to physical education majors once per year showing all of the activities which the student has completed in the Learning Laboratory.

VITAL RESOURCES

The resources discussed below are aspects of learning which were found to require unexpected amounts of attention when operating the competency based individualized program at Temple University.

Accurate Advisement: Complete advisement and counseling of students is essential. It is not reasonable to expect intelligent decisions without adequate and accurate information being readily available. The "grapevine" system of advising is particularly unsuited in an individualized program where there are few rigid rules and each student can structure a plan for learning which fits her/his own inclinations.

Accessible Staff: The staff must easily and willingly accessible on a regularly scheduled basis for both advising and assistance to learning. A competency based program generates excitement in learning with interaction between enthusiastic staff and eager students. A lack of interaction and/or of interest can result in feelings of alienation and aloneness on the part of both students and staff. The appropriate management of the personal

interaction is a particulary vital and sensitive aspect of the competency based program. It contains potential for being a most valuable ingredient of the program or the reason for its failure.

Extensive Materials: Pertinent, concise, complete, and accurate explanatory and planning materials must be given to the learner. It is imperative that these materials be available before the semester begins so learners can plan their study. Learners are encouraged to use a variety of resources in patterns set by the learner, rather than to depend on patterns set by others. Well developed materials (e.g., written booklets, loop films, video-tape equipment) increase the possibility of independent learning.

Learner-Oriented Information: The information describing the procedures utilized by the program and competencies required must be user (learner) oriented. One way of accomplishing this is to organize the information around questions learners must answer in order to plan their learning experiences. Using questions as the Table of Contents for the Learning Laboratory Handbook and the Learning Guides has proven of major use to the students using the materials and to the faculty as they write the materials.

Faculty Involved in Continued Development: The faculty must be continually involved in clarification of the bases of individualized competency based learning and development of improved ways of doing it. It is easy to begin making expedient decisions which quickly erode individual student's choices by moving toward a more rigid program. On-going discussion and testing of new ideas against the basic point of view of the program will help keep such a program alive and healthy.

EVALUATION

Non-physical education major students generally are delighted when they discover the Learning Lab. It generally meets needs they had only hoped, but did not expect, would be met in any educational institution. They generally enroll in the Lab under elective credits. Through the Laboratory those students interested in, or already participating in, activity clubs, such as karate or skiing, can receive semester hour credits for something they want to learn and for skills they are already attaining. The same holds true for those individuals who are participating in varsity sports and although they must still pass the skill and knowledge tests involved these are usually not too difficult to a really dedicated and interested participant.

The non-physical education major students particularly value the flexible schedule of the Lab which does not require any set practice time. Many students who have rather rigid course schedules in their major areas of study can work with skilled friends on evenings and weekends. The students value the fact that when they become competent they can take, and pass, the skill and knowledge tests in the Lab which is open almost all day, every day.

There are also students who prefer the convenience of traditional classes where opponents, facilities, equipment and instruction are provided for them on a regular basis. For these students it is important that the traditional program be continued in conjunction with a program like the Lab rather than replaced by it.

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